UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/588,088	06/06/2000	Jeffrey G. Reh	TI-29015	8880

7590 10/15/2004

W Daniel Swayze Jr.
Texas Instruments Incorporated
P O Box 655474 MS 3999
Dallas, TX 75265

EXAMINER	
LE, KIMLIEN T	

ART UNIT	PAPER NUMBER
2653	

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/588,088	Applicant(s) REH ET AL.	
	Examiner Kimlien T Le	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9,14,15 and 18-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9,14,15 and 18-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on April 20, 2004 have been fully considered but they are not deemed to be persuasive.

Applicant asserts on page 2:

It is respectfully submitted that Nakamura does not disclose or suggest the presently claimed invention including the read channel arrangement having a substantially continuous variable read channel data processing rate which varies according to the rate at which read head reads the data from the mass memory storage medium in independent Claims 1 and 14, albeit defined as the step of using the head processor to process the data read by the read head by varying the processing rate according to the rate at which the read head reads the data on the medium in the independent Claim 18 and using the write head controller having a continuous variable data storing rate in Independent Claim 20.

The Examiner maintains that Nakamura (U.S. Patent 5,808,995) discloses "the read channel arrangement having a substantially continuous variable read channel data processing rate which varies according to the rate at which read head reads the data from the mass memory storage medium " (column 7, lines 1-10; column 16, lines 22-28, column 7, lines 50-55; Each channel signal has a frequency band; The frequency depends on the position on the disk of the optical pickup obtained by the optical pickup position detecting circuit ; The position depends on a read transfer rate of speed).

Also, Applicant asserts on page 3:

Nakamura does not relate to writing.

The Examiner maintains that Nakamura (U.S. Patent 5,808,995) discloses" a write control means" (column 11, lines 35-40).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5,9,14-15 and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al.(U.S. Patent 5,808,995).

Regarding claim 1, Nakamura et al shows a mass memory storage device comprising: a support arrangement (inherent) configured to support a mass memory storage medium which stores data at a substantially uniform density; a drive arrangement (Fig. 1; element 2; See also column 7, lines 1-10) operatively connected to the support arrangement such that the drive arrangement rotates the mass memory storage medium at a substantially constant rotational speed when the mass memory storage device is operated in its intended way; a read head (Fig. 1; element 3; See also column 6, lines 55-65) for reading the data stored on the mass memory storage medium, the read head being positioned adjacent to the stored data on the medium and the read head being movable relative to the medium such that when the mass memory storage medium is rotated at the constant speed, the data is read at a variable rate; and a read channel arrangement (Fig. 1; element 3; See also column 7, lines 40-50) for processing the data read by the read head, the read channel arrangement having a substantially continuously variable read channel data processing rate which varies according to the rate at which the read head reads the

data from the mass memory storage medium(Fig. 1; element 1; See also column 6, lines 55-65).

Regarding claim 2, Nakamura et al shows a device according to Claim 1, wherein the device is a CD drive and the medium is a CD (Abstract).

Regarding claim 3, Nakamura et al shows a device according to Claim 1, wherein the CD is a standard format CD in which the data is stored at a substantially uniform density along a spiral track(Abstract).

Regarding claim 4, Nakamura et al shows a device according to Claim 3, wherein the read head is moved radially as the drive arrangement rotates the CD at a substantially constant rotational speed such that the read head follows and reads data from the spiral track(Abstract).

Regarding claim 5, Nakamura et al shows a device according to Claim 3, wherein the read channel data processing rate varies in direct relationship with the radial position of the read head, thereby allowing the read channel arrangement to process the data read by the read head at the rate at which the data is being ready by the read head from the spiral track of the CD (Abstract).

Regarding claim 9, Nakamura et al shows a device according to Claim 1, wherein the read head is an optical read head (column 1, lines 10-25).

Regarding claim 14, Nakamura et al shows a computer system including a mass memory storage device for reading data stored on a data storage surface of a mass memory storage medium, the mass memory storage device comprising: a housing (inherent) that receives and supports a mass memory storage medium which stores data at a substantially uniform density; a drive assembly (Fig. 1; element 2; See also column 6,

lines 55-65) operatively connected to the housing such that when the device is operated in its intended way, the drive assembly rotates the medium at a substantially constant rotational speed; a read head (Fig. 1; element 3; See also column 6, lines 55-65) for reading the data from the data storage surface of the medium, to the read head being movably supported by the housing adjacent to the data storage surface of the medium, thereby causing the read head to read the data stored on the medium such that when the mass memory storage medium is rotated at the constant speed, the data is read at a variable rate; and a read channel arrangement (Fig. 1; element 6; See also column 7, lines 1-5) operatively connected to the read head, the read channel arrangement including a read channel processor which processes the data read by the read head and which has a continuously variable data processing rate that is varied according to the rate at which the read head reads the data on the medium.

Regarding claim 15, Nakamura et al shows a computer system according to Claim 14, wherein the device is a CD drive and the medium is a CD (Abstract).

Regarding claim 18, Nakamura et al shows a method of reading data stored on a mass memory storage medium, the method comprising the steps of: supporting the mass memory storage medium having data stored on the medium at a substantially uniform density; rotating the medium at a substantially constant speed; using a read head, reading the data stored on the medium by positioning the read head adjacent to a desired portion of the medium and moving the read head relative to the medium as the data is read such that when the mass memory storage to medium is rotated at the constant speed, the data is read at a variable rate; and using a read head processor having a continuously variable

processing rate, processing the data read by the read head by varying the processing rate according to the rate at which the read head reads the data on the medium CD (Abstract).

Regarding claim 19, Nakamura et al shows a method according to Claim 18, wherein the medium is a medium having data stored on the medium at a substantially uniform density selected from the group including (i) a CD having data stored optically on a data storage surface of the CD, (ii) a hard disk having data stored magnetically, and (iii) a floppy disk having data stored magnetically (Abstract).

Regarding claim 20, Nakamura et al shows a method of storing data on a mass memory storage medium having a substantially uniform data storage density, the method comprising the steps of: supporting the mass memory storage medium (Fig. 1; element 1; See also column 6, lines 55-65) for rotation; rotating the medium at a substantially constant speed; using a write head, storing the data to the medium by positioning the write head, adjacent to a desired portion of the medium while the medium is rotated at the constant speed and moving the write head relative to the medium as the data is stored; and using a write head controller (Fig. 1; element 8; See also column 7, lines 30-40) having a continuously variable data storing rate, storing the data on the medium by varying the data storing rate according to the position of the write head such that the data is stored at a substantially uniform density(Abstract).

Regarding claim 21, Nakamura et al shows a method according to Claim 20, wherein the medium is a medium selected from the group including (i) a CD having data stored optically on a data storage surface of the CD, (ii) a hard disk having data stored magnetically, and (iii) a s floppy disk having data stored magnetically (Abstract).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Point of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimlien Le whose telephone number is 703 305 3498. The examiner can normally be reached on M-F 8a.m-5p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 703 305 6137. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9314 for regular communications and 703 872 9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 3900.

Kimlien Le

TAN DINH
PRIMARY EXAMINER

10/14/04